CLAIMS

1. (Original) An amplification circuit for a wireless base station, the amplification circuit comprising:

a first port adapted to communicate signals to and from an antenna;

a second port adapted to communicate signals to and from a base station;

a first path, coupled between the first and second ports, the first path including at least one bandpass filter and an amplifier that pass and amplify upstream signals in a first frequency band; and

a second path, coupled between the first and second ports, the second path including a filter that stops upstream signals in the first frequency band and passes upstream signals in at least a second frequency band and downstream signals in at least third and fourth frequency bands.

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2. (Original) The circuit of claim 1, wherein the first path includes:

a first bandpass filter, having an input that receives upstream signals from the first port, the first bandpass filter passing signals in the first frequency band;

an amplifier, coupled to the first bandpass filter, that amplifies the passed signals in the first frequency band; and

a second bandpass filter, coupled to the amplifier, that passes signals in the first frequency band to the second port.

3. (Original) The circuit of claim 2, wherein the first bandpass filter passes signals between 1850 and 1990 Megahertz.

4. (Original) The circuit of claim 2, wherein the first bandpass filter passes signals with frequencies assigned to personal communications services (PCS).

5. (Original) The circuit of claim 2, wherein the second path includes a bandstop filter that stops signals with frequencies assigned to personal communications services (PCS).

6. (Original) The circuit of claim 1, wherein the first frequency band is higher than the second frequency band.

7. (Original) A base station circuit for a wireless system that supports services in at least first and second frequency bands, the circuit including:

an antenna;

at least one amplification circuit, the amplification circuit including:

a first path, coupled to the antenna, the first path including at least one bandpass filter and an amplifier that pass and amplify upstream signals in the first frequency band,

a second path, coupled in parallel with the first path, the second path including a filter that stops upstream signals in the first frequency band and passes upstream signals in at least the second frequency band along with downstream signals; and

a transceiver, coupled to the first and second paths of the amplification circuit, that is adapted to receive upstream signals in at least the first and second frequency bands and to transmit the downstream signals in at least third and fourth frequency bands.

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8. (Original) The circuit of claim 7, wherein the first path includes:

a first bandpass filter, having an input that receives upstream signals from the antenna, the first bandpass filter passing signals in the first frequency band;

an amplifier, coupled to the first bandpass filter, that amplifies the passed signals in the first frequency band; and

a second bandpass filter, coupled to the amplifier, that passes signals in the first frequency band.

9. (Original) The circuit of claim 8, wherein the first bandpass filter passes signals between 1850 and 1990 Megahertz.

10. (Original) The circuit of claim 8, wherein the first bandpass filter passes signals with frequencies assigned to personal communications services (PCS).

11. (Original) The circuit of claim 8, wherein the second path includes a bandstop filter that stops signals with frequencies assigned to personal communications services (PCS).

12. (Original) The circuit of claim 7, wherein the transceiver is coupled to the amplification circuit through a single feeder cable for upstream and downstream signals.

13. (Original) The circuit of claim 7, wherein the transceiver communicates upstream and downstream signals with the antenna through a single feeder cable.

14. (Original) The circuit of claim 7, wherein the amplification circuit comprises a plurality of amplification circuits that are cascaded to allow upstream frequency bands associated with separate services to be selectively amplified.

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15. (Original) A method for selectively amplifying upstream signals for at least first and second wireless services, the method comprising:

receiving signals;

passing a first frequency band of the received signal;

amplifying the first frequency band of the received signal; and

passing at least one additional frequency band of the received signal without amplification.

16. (Original) The method of claim 15, wherein receiving signals comprises receiving signals for first and second wireless services.

17. (Original) The method of claim 15, wherein receiving signals comprises receiving signals in first and second frequency bands, wherein the first frequency band is higher in frequency compared to the second frequency band.

18. (Original) The method of claim 15, wherein passing the first frequency band comprises passing a frequency band between 1850 and 1990 Megahertz.

19. (Original) The method of claim 18, wherein passing at least one additional frequency band comprises passing a frequency band below 1000 Megahertz.

20. (Original) The method of claim 15, and further comprising selectively amplifying received signals in additional frequency bands.

21. (Original) An amplification circuit for a wireless base station, the amplification circuit comprising:

a first port adapted to communicate signals to and from an antenna, the signals including upstream signals in at least first and second frequency bands each associated with a different service, wherein the first frequency band is higher in frequency than the second frequency band;

a second port adapted to communicate signals to and from a base station;

a first path including:

a first bandpass filter, coupled to the first port, the first bandpass filter passing upstream signals in the first frequency band and stopping upstream signals in the second frequency band,

an amplifier, coupled to the first bandpass filter, the amplifier amplifying signals in the first frequency band, and

a second bandpass filter, coupled to the amplifier, the second bandpass filter passing upstream signals in the first frequency band to the second port;

a second path, coupled between the first and second ports, the second path including a band stop filter that stops signals in the first frequency band and passes at least upstream signals in the second frequency band and passes downstream signals received at the second port.

22. (Original) The circuit of claim 21, wherein the first frequency band comprises a band above 1800 Megahertz and the second frequency band comprises a band below 1000 Megahertz.

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23. (Original) The circuit of claim 21, wherein the pass band of the first and second bandpass filters overlaps in frequency with a stop band of the band stop filter.

24. (Original) A wireless system, comprising:

a mobile switching center that is adapted to be coupled to the public switched telephone network;

a plurality of base stations, communicatively coupled to the mobile switching center, that are adapted to communicate with wireless terminals using one of at least two services; and

wherein each base station supports the at least two services within the geographic area of the base station.

25. (Original) The wireless system of claim 24, wherein each base station includes an amplification circuit that amplifies signals received from wireless terminals for one of the services and that passes without amplification signals from other wireless terminals for the other service and passes downstream signals to the wireless terminals.

26. (Original) The wireless system of claim 24, wherein each base station is adapted to communicate upstream signals for the wireless terminals in a first frequency band for a first of the at least two services and in a second frequency band for a second of the at least two services.

27. (Original) The wireless system of claim 26, wherein the first frequency band is above 1800 Megahertz and the second frequency band is below 1000 Megahertz.

28. (Original) A method for amplifying upstream signals for first and second wireless services, the method comprising:

receiving signals;

passing a first frequency band of the received signal;

amplifying the first frequency band of the received signal;

passing at least one additional frequency band of the received signal without amplification, the at least one additional frequency band being lower in frequency than the first frequency band; and

combining the first frequency band and the at least one additional frequency band into a signal for transmission.

29. (Original) A base station, comprising:

an antenna;

a plurality of amplification circuits coupled to the antenna and coupled in series, each amplification circuit adapted to selectively amplify upstream signals in a selected frequency band for a selected service and to pass downstream signals and other upstream signals;

a feeder cable, coupled to a first one of the serially connected plurality of upstream amplification circuits; and

at least one transceiver, coupled to the feeder cable, that is adapted to communicate signals over the antenna for a plurality of services.

30. (Original) The base station of claim 29, wherein the first of the plurality of upstream amplification circuits receives a DC voltage over the feeder cable and passes the DC voltage to at least another of the plurality of upstream amplification circuits.

31. (Original) The base station of claim 29, wherein each of the plurality of amplification circuits includes first and second paths with the first path selectively amplifying a selected upstream frequency band and the second path passing upstream and downstream signals outside the selected frequency band.

32. (Original) The base station of claim 29, wherein a last of the plurality of amplification circuits includes a DC grounded antenna port.